

## REMARKS

In response to the Office Action dated February 11, 2005, Applicants respectfully request reconsideration and withdrawal of the rejections of the claims.

Claims 3, 5-12 and 25-30 were withdrawn from further consideration, as being drawn to non-elected species. Applicants respectfully traverse the inclusion of claims 6-12 in this group of withdrawn claims. In the response filed November 27, 2001, claims 6-12 were included in each of the groups of claims that were identified as being readable upon the elected species. The Office Action has not contested Applicants' designation of these particular claims, nor otherwise identified any recitations in these claims that preclude them from reading upon the elected species. Accordingly, Applicants respectfully request that claims 6-12 be included in the group of claims under consideration. If the Examiner maintains the withdrawal of these claims, he is respectfully requested to explain the basis for such action.

Claims 1, 2, 4 and 13-24 were rejected under the second paragraph of 35 U.S.C. §112, as being indefinite. To remove the basis for this rejection, the claims have been reviewed, and revised as appropriate to place them in more conventional U.S. format. Reconsideration and withdrawal of the rejection is respectfully requested.

Claims 1, 2 and 14 were rejected under 35 U.S.C. §102, on the grounds that they were considered to be anticipated by the Fidalgo patent. The remaining claims under consideration were rejected under 35 U.S.C. §103, as being unpatentable over the Fidalgo patent in view of secondary references. It is respectfully submitted that the Fidalgo patent does not anticipate the claimed subject matter.

One of the distinguishing features of the claimed subject matter is that the connection pads, for connecting the ends of the antenna winding to the electronic module, are both located on a common side of the antenna turns. For example, as shown in each of Figures 1-5c of the application, the antenna turns 11 encircle the connection pads 12 located within the interior of the antenna. In contrast, the Fidalgo patent is directed to a smart card in which the connection pads are located on opposite sides of the antenna turns. For example, as illustrated in Figure 2 of the patent, the connection pads 15 straddle the windings 5 of the antenna.

In one conventional technique for manufacturing smart cards, a plurality of layers are laminated to form the card body, as depicted in Figure 5a of the present application. Thereafter, a cavity is formed in the body, by a milling or drilling process, to accommodate the electronic module. The milling of the cavity must be sufficient to expose the contact pads for the antenna. When the antenna windings are located between the contact pads, as in the configuration of the Fidalgo patent, it is possible that they can be damaged by the milling process. Consequently, the Fidalgo patent discloses a technique that avoids the need for milling, by molding one or more of the card body layers with a pre-fabricated cavity 17 that leaves the contact pads 15 exposed when the card is laminated. See Figure 4 of the patent.

The claimed invention employs a different approach to this problem, by locating the turns of the antenna to one side of the connection pads. As a result, it becomes possible to mill the cavity in the card body, without affecting the antenna winding, as depicted in Figure 5b of the present application.

Of course, when the turns of the antenna are both located on the same side of the connection pads, one end of the antenna winding cannot be connected to a

respective connection pad without crossing over the antenna winding itself. In accordance with the claimed invention, therefore, an insulating bridge is employed for this connection, to avoid short-circuiting the antenna.

It is respectfully submitted that the *Fidalgo* patent does not disclose the subject matter recited in claim 1, or new claims 31-39. First, as noted above, it does not disclose an antenna whose turns are located to one side of the connection pads, e.g., the antenna turns encircle the connection pads. Rather, in the structure of the *Fidalgo* patent, the turns of the antenna are located between the connection pads.

Second, because of this distinction, the *Fidalgo* patent does not disclose an insulating bridge that connects one of the ends of the antenna winding to a respective connection pad. Because of the location of the connection pads in the structure of the *Fidalgo* patent, the ends of the antenna winding are directly connected to the respective connection pads. An insulating bridge is not needed.

In connection with the claimed insulating bridge, the Office Action makes reference to element 20 illustrated in Figure 9 of the *Fidalgo* patent. It is respectfully submitted, however, that this element does not constitute an insulating bridge that functions to connect one of the ends of the antenna to a respective connection pad. Figure 9 of the patent pertains to the electronic module 7 of the integrated circuit card. Element 20 comprises a dielectric that forms a substrate on which the integrated circuit chip 8 and contact pads 10, 11 are mounted. This figure does not illustrate the antenna. In particular, it does not disclose an insulating bridge that functions to connect one end of an antenna to a connection pad.

For at least these reasons, therefore, it is respectfully submitted that the *Fidalgo* patent does not anticipate the subject matter of claims 1, 2 and 14, nor new claims 31-39.

The dependent claims recite other distinguishing features of the invention that are likewise not suggested by the references. For example, claim 4 recites that the method of manufacturing the smart cards includes the steps of assembling the support sheet to foils to form a card body, machining a cavity and connection recesses in an upper face of the card body, and fixing an electronic module into the cavity. The rejection of this claim suggests that it would be obvious to modify the teachings of the *Fidalgo* patent to include these steps. However, as noted previously, the *Fidalgo* patent discloses an alternative technique for manufacturing a smart card, which renders the machining step unnecessary. In light of its teachings, there would be no reason to perform the machining step.

Claim 7 recites that the antenna is produced by incrustation on the support sheet. New claim 34 is also directed to this feature of the invention. Claim 35 further recites that the incrustation is performed with an ultrasound technique. These claimed features are not disclosed in the references that form the basis for the rejections.

Claim 13 recites that the connection pads comprise contact zones having a specific relationship to the mid-perpendicular of the cavity, and that each contact zone is extended by a track with its edge parallel to the electronic module. The rejection of claim 13 does not explain how the references are being interpreted to suggest this claimed subject matter. If the rejection is not withdrawn, the Examiner

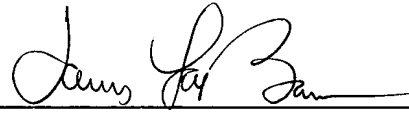
is respectfully requested to identify the portions of the references that are being relied upon as disclosing the above-noted subject matter.

In view of the foregoing, it is respectfully submitted that all pending claims are allowable over the prior art of record. Reconsideration and withdrawal of the rejections is respectfully requested. Furthermore, since claim 1 is generic to multiple species identified in the Office communication dated October 1, 2001, reinstatement of the withdrawn claims is submitted to be in order.

Respectfully submitted,

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Date: July 11, 2005

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